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Notice of Allowability	Application No.	Applicant(s)	
	10/649,427	RUELKE ET AL.	
	Examiner	Art Unit	
	Dac V. Ha	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 02/22/07.
2. ☒ The allowed claim(s) is/are 1, 2, 4-8, 10, 9, 11-13, 20, 22, 30-34, 23-29, 35, 37, 38, renumbered as 1-29, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Robert L. King (Reg. No. 30,185) on 03/27/07.

The application has been amended as follows:

Claim 1, line 10, "a first signal transfer" has been changed to --a first signal transfer function--

Claim 1, line 11, "a second signal transfer" has been changed to --a second signal transfer function--

2. The following is an examiner's statement of reasons for allowance:

Applicant has amended the claims in accordance with the office action dated 12/27/06. Upon further consideration, claims 1-2, 4-13, 20, 22-35, 37 and newly added dependent claim 38 are allowed. Particularly, prior art of record, taken individually or collectively, fails to fairly teach method and apparatus for gain control including "receiving a signal strength of a signal, comparing the signal strength to a threshold value that defines an end point of a range of signal strength, and controlling gain of the signal according to either a first signal transfer function if the signal is less than the threshold value or a second signal transfer function if the signal is greater than the threshold value, the automatic gain control state machine controlling gain of the signal

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over a plurality of ranges of the signal characteristic according to a gain control function which is continuous within each of the plurality of ranges and modified to be non-continuous at an edge of each of the plurality of ranges" in independent claim 1, and similarly in independent claim 20; "comparing the signal strength to a threshold value, the threshold value defining an end point of a range of signal strength; selecting a first attenuation step size if the signal is less than the threshold value; and selecting a second attenuation step size if the signal is greater than the threshold value" in independent claim 23; "controlling gain of the signal by a gain stage using the detected signal characteristic, wherein the gain is controlled over a plurality of ranges of the signal characteristic according to a gain control function; determining if bidirectional gain tracking is enabled; controlling the gain bidirectionally if tracking is enabled; and controlling the gain unidirectionally if tracking is not enabled" in independent claim 35 and similarly in independent claim 37 (claims 2, 4-13, 22, 24-34, 38 depend therefrom). Thus, claims 1-2, 4-13, 20, 22-35, 37-38 are found to be novel and unobvious over prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a horizontal line underneath.

Dac V. Ha
Primary Examiner
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